

Amendments to the Written Description of the Specification

Applicant presents replacement paragraphs below indicating the changes with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

On page 1, after the title insert: --Background Of The Invention--;

On page 1, after "Background of the Invention" but before the first paragraph insert --Field of the Invention--;

On page 1, before the second paragraph beginning on line 4, insert --Discussion of the Related Art--;

Please amend the second and third paragraphs on page 1, lines 10-29 as shown below:

To check the proper operation of the microprocessor, a monitoring circuit 18 (TEST) is generally integrated to on integrated circuit 10. Monitoring circuit 18 is capable of reading specific data provided by microprocessor 12 on execution of a program, and of possibly processing the read data. Test terminals 22 connect monitoring circuit 18 to an analysis tool 24. Analysis tool 24 may process the received signals, for example, according to commands provided by a user, and ensure a detailed analysis of the operation of microprocessor 12. In particular, analysis tool 24 may determine the program instruction sequence really executed by microprocessor 12.

The number of test terminals 22 may be on the same order of magnitude as the number of input/output terminals 16, for example, from 200 to 400 terminals. Test terminals 22 as well as the connections of monitoring circuit 18 take up a significant silicon surface area, which causes an unwanted increase in the circuit cost. For this purpose, a first version of integrated circuit 10 comprising monitoring circuit 18 and test terminals 22 is produced in small quantities to debug the program of microprocessor 12 or "user program". After this debugging, a version of integrated circuit 10 ~~is of~~ without monitoring circuit 18 and of test terminals 22 is sold. This ~~implies the~~ requires forming of two versions of the integrated circuit, which requires a significant amount of work and is relatively expensive. Further, the final chip is not necessarily identical to the tested chip.

Please amend the second full paragraph on page 2, lines 9-13 as shown below:

Thus, standard IEEE-ISTO-5001 in preparation provides, in its 1999 version, accessible, for example, on website www.ieee-isto.org/Nexus5001, a specific message exchange protocol between a monitoring circuit and an analysis tool for a monitoring circuit 18 requiring but a reduced number of test terminals 22.

Please amend the paragraph beginning on page 2, line 30 through page 3, line 14 as shown below:

To limit the number of test terminals, each packet is divided into segments of n bits, where n for example ranges between 4 and 16, transmitted by an n -bit MDO bus. The n least significant bits of the first data packet of the message are copied bit by bit into a first segment, after which the n remaining least significant bits of the data packet are copied bit by bit into a second segment, and so on until each bit in the packet has been copied. The unused most significant bits of the last segment thus formed receive a predetermined value, for example, 0. Each data packet is, as previously, divided into segments. The segments are sequentially transmitted by bus MDO, at the rate of a clock signal, not shown, specific to the monitoring circuit. To enable reconstruction of the data packets from the segments, it is provided to transmit with each segment on additional test terminals a code MSEO which enables the analysis tool to identify the nature of the data contained in the segment. Standard IEEE-ISTO-5001 provides codes MSEO for identifying that a segment contains: a message start (segment SM), intermediary data (segment NT), a packet end (segment EP), a message end (segment EM), or that this segment is an empty segment (segment ID) corresponding to an idle period between two messages.

On page 5, before the first line, insert --Summary of the Invention--;

Please amend the third paragraph on page 5, lines 6-9 as shown below:

To achieve these and other objects, the present invention provides a method for transmitting, between a monitoring circuit integrated to a microprocessor and an analysis tool, digital messages each comprising at least one data packet, comprising the steps of:

On page 7, before line 3, insert --Brief Description of the Drawings--;

On page 7, before line 17, insert --Detailed Description--;

On page 10, line 14, please insert:

--Such alterations, modifications, and improvements are intended to be part of this disclosure, and are intended to be within the spirit and the scope of the present invention. Accordingly, the foregoing description is by way of example only and is not intended to be limiting. The present invention is limited only as defined in the following claims and the equivalents thereto.

What is claimed is:--